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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/918,878	07/31/2001	Morgan Rey Benson	DP-304882	2782

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MARGARET A. DOBROWITSKY
DELPHI TECHNOLOGIES, INC
4TH FLOOR
1450 W. LONG LAKE ROAD
TROY, MI 48098

EXAMINER

WILLS, MONIQUE M

ART UNIT	PAPER NUMBER
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1746

DATE MAILED: 10/07/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/918,878

Applicant(s)

BENSON ET AL.

Examiner

Wills M Monique

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 31 July 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Information Disclosure Statement

The information disclosure statement(s) filed September 17, 2001 has/have been received and complies with the provisions of 37 CFR 1.97, 1.98 and MPEP § 609.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1 & 10 are rejected under 35 U.S.C. 102(b) as being anticipated by Velasquez et al. U.S. Patent 5,746,781.

Velasquez teaches a plurality of bicell batteries being stack on top of one another (col. 3, lines 25-30). Each bicell includes an anode and cathode (col.4, lines 45-50). Each anode and cathode includes current collectors that comprise grids (col. 4, lines 45-55). Each current collector is also connected to a current collector tab (terminal) which extends from the edge of the current collector. In batteries comprising multiple cells, the anode tabs (terminals) are preferably welded together and connect to a lead (tang). The cathode tabs (terminals) are similarly welded and connect to a leak (tang). External loads can be electrically connected to the leads. See column 4, lines 45-60.

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Active material may be coated on one side of each current collector leaving the other side of the electrode grid exposed (col. 3, lines 1-10). The bicells are packaged in a moisture-impermeable envelope (col. 12, lines 45-50). Each bicell unit comprises a positive terminal and negative terminal at opposite ends of the battery unit (Fig. 1). The plurality of bicells are stacked (col. 3, lines 25-31) inherently providing positive and negative terminals being equal to the number of battery units. Stated differently, each bicell unit as one positive and negative terminal, therefore a stack of bicells will inherently have positive and negative terminals being equal to the number of battery units. The batteries may be connected in series or parallel (col. 5, lines 30-40).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 11 -16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Velsquez et al. U.S. Patent 5,746,781.

Velasquez teaches a plurality of bicells as described hereinabove, including forming a stack from a plurality of bicells.

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The reference is silent to rotating a second battery unit around a horizontal axis 180 degrees to form said stack, orienting the first and second batteries in different orientations and repeating said battery orientation.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to rotate the second battery unit to form a stack, since it has been held that rearranging parts of an invention involves only routine skill in the art. In re Japikse, 86 USPQ 70.

Regarding orienting the first and second batteries in different orientations, it would have been obvious to one of ordinary skill in the art at the time the invention was made to rotate the second battery unit to form a stack, since it has been held that rearranging parts of an invention involves only routine skill in the art. In re Japikse, 86 USPQ 70.

Regarding repeating the orientations, it would have been obvious to one of ordinary skill in the art at the time the invention was made to repeat different orientations of first and second battery units , since it has been held that mere duplication of the essential working parts of a device involves only routine skill in the art. St. Regis Paper Co. v. Bemis Co., 193 USPQ 8.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 3-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Velasquez et al. U.S. Patent 5,746,781, in view of Guindy et al. U.S. Pub. 2002/0081488.

Velasquez teaches a plurality of bicells as described hereinabove, including anodic and cathodic exposed grids.

The reference is silent to cover strips in contact with the anode and cathode exposed grids.

Guindy teaches that it is conventional to employ terminal strips in contact with current collectors in order to electrically engage the battery by facilitating power to an electrical device (par. 3). Further, the current collector 28 includes an extension 48 extending from intermediate electrode end edge 38 within region 45 and extends outwardly beyond end edges 34 and 36 of first and second electrodes (par. 21).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to employ the terminal strips of Guindy in the bicells of Velasquez, in order to electrically engage the battery by facilitating power to an electrical device.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 5-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Velsquez et al. U.S. Patent 5,746,781, in view of Hanafusa et al. U.S. Pub. 2001/0051298 and further in view of Xing et al. U.S. Patent 6,403,262.

Velasquez teaches a plurality of bicells as described hereinabove, including anodic and cathodic exposed grids and an aluminum casing and electrically conductive body portions having first through fourth regions (50,60 of Fig. 2).

The reference is silent to a plurality of apertures in the conductive body, insulating material around the conductive body and an adhesive layer through the apertures of said conductive body.

Hanafusa teaches that it is conventional to employ a plurality of thin cells and a plurality of apertures extending through the electrically conductive body portion (2,3 of Fig. 31). The apertures are provided so that an adhesive resin can seal the outer layers of the foil casing to improve the structural integrity of the seal around the casing (par. 14 and par. 198).

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Xing teaches that it is conventional to employ insulating material around the electrically conductive body of a bi-cell to prevent short circuiting of the cell (abstract and col. 3, lines 5-18).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to employ the apertures of Hanafusa in the electrically conductive body of Velsquez to improve the structural integrity of the seal.

Regarding providing electrically insulating material around the electrically conductive body, it would have been obvious to one of ordinary skill in the art the time the invention was made to employ the insulating material of Xing around the conductive body of Velasquez to prevent short-circuiting of the cell.

Conclusions

Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Monique Wills whose telephone number is (703) 305-0073. The Examiner can normally be reached on Monday-Friday from 8:30am to 5:00 pm.

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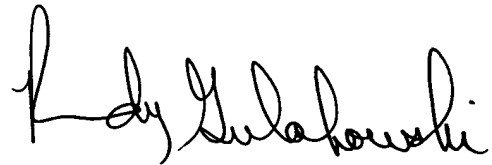
Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0661.

If attempts to reach Examiner by telephone are unsuccessful, the Examiner's supervisor, Randy Gulakowski, may be reached at 703-308-4333.

The unofficial fax number is (703) 305-3599. The Official fax number for non-final amendments is 703-872-9310. The Official fax number for after final amendments is 703-872-9311.

Mw

09/23/03

A handwritten signature in black ink, appearing to read "Randy Gulakowski". The signature is fluid and cursive, with the first name "Randy" and last name "Gulakowski" clearly distinguishable.

RANDY GULAKOWSKI
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1700